ENVIRONMENTAL MONITORING AND ASSESSMENT
Volume 23 Nos. 1–3 December 1992

Publisher's Note v

A. H. EL-SHAARAWI and D. C. L. LAM / Editorial vii

W. G. BOOTY, D. C. L. LAM, A. G. BOBBA, I. WONG, D. KAY, J. P. KERBY, and G. S. BOWEN / An Expert System for Water Quality Modelling 1

A. S. CROWE and J. P. MUTCH / Expres: An Expert System for Assessing the Fate of Pesticides in the Subsurface 19

IVAN MUZIK / Derivation of Unit and Flood Hydrographs Using a GIS 45

D. A. SWAYNE, C. W. WANG, JOHN STOREY, D. C. L. LAM, and JANE KERBY / An Expert System for Assessing Safety and Security of Heterogeneous Public Water Sources 57

A. S. FRASER, D. S. JEFFRIES, D. C. L. LAM, and J. STOREY / Evaluation of the Effects of Acid Precipitation in Eastern Canada Using the RAISON System 71

D. C. L. LAM, I. WONG, D. A. SWAYNE, and J. STOREY / A Knowledge-Based Approach to Regional Acidification Modelling 83

D. S. JEFFRIES, D. C. L. LAM, I. WONG, and R. M. BLOXAM / The Predicted Effect of SO_2 Emission Controls on the Water Quality of Eastern Canadian Lakes 99

MICHAEL J. BENDER, CHRIS KATOPODIS, and SLOBODAN P. SIMONOVIC / A Prototype Expert System for Fishway Design 115

IVAN MUZIK / A Physically Based Method for Prediction of Runoff Frequencies 129

VAN THANH-VAN NGUYEN and NOPHADOL IN-NA / Plotting Formula for Pearson Type III Distribution Considering Historical Information 137

A. MAUL / Application of Generalized Linear Models to the Analysis of Toxicity Test Data 153

BYRON A. BODO / Statistical Analyses of Regional Surface Water Quality in Southeastern Ontario 165

S. M. TANG and I. B. MACNEILL / Monitoring Statistics Which Have Increased Power over a Reduced Time Range 189

I. K. TSANIS and A. H. EL-SHAARAWI / Trend Evaluation of Water Quality Parameters in the Niagara and St. Lawrence Rivers 205

S. R. ESTERBY, A. H. EL-SHAARAWI, and H. O. BLOCK / Detection of Water Quality Changes Along a River System 219

ARVIND SHARMA and JEGA SELLIAH / Variances and Covariances Underlying Loading Estimates and Part-Whole Relationships 243

A. H. EL-SHAARAWI / Design and Model Based Inferences with Applications to Acidification of Lakes in Eastern Canada 269

Author Index of Volume 23 283